

WHAT IS CLAIMED IS:

1 1. A method comprising:
2 evaluating one or more characteristics associated with one or more signals sent
3 by a remote communication device to a local communication device,
4 the signals being sent according to a communication protocol allowing
5 variability in the one or more characteristics, the one or more
6 characteristics differing between at least some implementations of the
7 communication protocol; and
8 comparing the evaluated one or more characteristics to characteristics of
9 signals sent by known devices.

1 2. The method as recited in claim 1 further comprising determining an
2 identity of the remote communication device based on the comparing of the evaluated
3 one or more characteristics.

1 3. The method as recited in claim 2 wherein the identity of the remote
2 communication device is determined according to at least one of brand, type or
3 model.

1 4. The method as recited in claim 1 wherein the evaluating occurs during
2 a training phase establishing properties of a communication medium coupling the
3 remote communication device to the local communication device.

1 5. The method as recited in claim 1 further comprising enabling a
2 communication feature according to the comparing of the evaluated one or more
3 characteristics to thereby better communicate with the remote communication device.

1 6. The method as recited in claim 5 wherein the remote communication
2 device is a digital modem and the communication feature is a request for spectral
3 shaping by an analog modem.

1 7. The method as recited in claim 1 wherein the remote communication
2 device one of a digital modem and analog modem.

1 8. The method as recited in claim 1 wherein the evaluating is performed
2 in a first communication device operating as a modem in accordance with ITU-T
3 Recommendation V.90.

1 9. The method as recited in claim 1 further comprising enabling one or
2 more performance enhancing or deficiency compensation features according to the
3 comparing of the evaluated one or more characteristics.

1 10. The method as recited in claim 1 wherein the local communication
2 device performs the evaluating by measuring a duration of one or more training
3 signals, duration of the one or more training signals being the one or more
4 characteristics of the one or more signals sent by the remote communication device.

1 11. The method as recited in claim 10 wherein the training signals are
2 modem training signals TRN_{1d} and TRN_{2d} and the duration of the modem training
3 signals are measured and wherein during the comparing, the measured duration is
4 compared to stored duration values to identify the remote communication device.

1 12. The method as recited in claim 10 wherein the duration is measured in
2 terms of a number of symbols transmitted.

1 13. An apparatus comprising:
2 means for evaluating one or more characteristics associated with one or more
3 signals sent by a remote communication device coupled to the
4 apparatus; and
5 means for comparing the evaluated one or more characteristics to known
6 characteristics to determine an identity of the remote communication
7 device.

1 14. The apparatus as recited in claim 13 further comprising means for
2 enabling one or more performance enhancing features according to the identification
3 of the remote communication device.

1 15. The apparatus as recited in claim 13 further comprising means for
2 enabling one or more deficiency compensation features according to the identification
3 of the remote communication device.

1 16. A computer program product encoded in at least one computer
2 readable medium, comprising:
3 a first instruction sequence executable to evaluate one or more characteristics
4 associated with signals sent by a remote communication device; and
5 a second instruction sequence executable to compare the evaluated one or
6 more characteristics to stored characteristics of known communication
7 devices and to provide a comparison result.

1 17. The computer program product as recited in claim 16 wherein the
2 comparison result is used to determine an identity of the remote communication
3 device.

1 18. The computer program product as recited in claim 16,
2 wherein the at least one computer readable medium is selected from the set of
3 a disk, tape or other magnetic, optical, or electronic storage medium
4 and a network, wireline, wireless or other communications medium.

1 19. The computer program product as recited in claim 16 further
2 comprising an instruction sequence executable to enable a communication feature
3 according to the comparison result to thereby better communicate with the remote
4 communication device.

1 20. The computer program product as recited in claim 19 wherein the
2 remote communication device is a digital modem and the feature is a request for
3 spectral shaping by an analog modem.

1 21. The computer program product as recited in claim 16 wherein the
2 computer program product is executable on a device having communication capability
3 and which is coupled to the remote communication device.

1 22. The computer program product as recited in claim 16 further
2 comprising an instruction sequence executable to enable at least one of a performance
3 enhancing or deficiency compensation feature according to the identification of the
4 remote communication device.

1 23. The computer program product as recited in claim 16 wherein duration
2 of one or more training signals are the one or more characteristics and wherein the
3 second instruction sequence compares the measured duration to stored duration values
4 to identify the remote communication device.

1 24. An apparatus comprising:
2 a device operable to measure one or more parameters associated with one or
3 more signals sent during a communication session with a remote
4 communications device;
5 storage elements containing known one or more parameters associated with
6 one or more known communication devices; and
7 wherein the device is operable to compare the measured one or more
8 parameters of the one or more signals to the stored one or more
9 parameters of known devices.

1 25. The apparatus as recited in claim 24 further comprising enabling one
2 or more performance enhancing or deficiency compensation features according to the
3 compare of the measured one or more parameters.

1 26. The apparatus as recited in claim 24 wherein comparing the measured
2 one or more parameters is used to determine an identity of the remote
3 communications device.

1 27. The apparatus as recited in claim 24 wherein the one or more signals
2 are sent during at least one of transceiver training and channel analysis.

1 28. The apparatus as recited in claim 24 wherein the one or more
2 parameters is the number of symbols sent.

1 29. The apparatus as recited in claim 24 wherein the device is a modem.

1 30. The apparatus as recited in claim 24 wherein the signals are training
2 signals and the parameters are duration of the training signals.

1 31. The apparatus as recited in claim 31 wherein the training signals are
2 modem training signals TRN_{1d} and TRN_{2d} , duration of the modem training signals
3 being measured and compared to known durations to determine an identity of the
4 remote communications device.

1 32. The apparatus as recited in claim 24 wherein the apparatus is disposed
2 on a single integrated circuit.

1 33. The apparatus as recited in claim 24 wherein the apparatus includes a
2 general purpose processor.